

REMARKS

The present application was filed on January 23, 2004 with claims 1 through 26. Claims 1 through 26 are presently pending in the above-identified patent application. Claims 1, 6, 11, 16, 19 and 22 are proposed to be amended.

In the Office Action, the Examiner rejected claims 1-3, 6-8, 11-13 and 22-24 under 35 U.S.C. §102(b) as being anticipated by Troutman (United States Number 3,848,236). In addition, the Examiner rejected claims 16-17 and 19-20 under 35 U.S.C. §103(a) as being unpatentable over Troutman in view of Furutani (United States Number 5,673,231). Claims 4-5, 9-10, 14-15 and 25-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Troutman in view of Mashiko et al. (United States Number 4,833,653).

Request for Updated Notice of References Cited (PTO-892)

As indicated above, Furutani (United States Number 5,673,231) was included in the rejection of claims 16-17 and 19-20 under 35 U.S.C. §103(a). Furutani, however, was not listed on the Notice of References Cited (PTO-892). Applicants respectfully request an updated Notice of References Cited (PTO-892) that includes Furutani.

Independent Claims 1, 6, 11 and 22

Independent claims 1, 6, 11 and 22 were rejected under 35 U.S.C. §102(a) or 103(a) as being unpatentable in view of Troutman, or Troutman in view of Furutani or Mashiko et al. With regard to claims 1, 6, 11 and 22, the Examiner asserts that during a read operation, Troutman turns on a plurality of precharge transistors during a precharge interval and thereafter during the evaluation interval, certain columns are conditionally discharged.

FIG. 2 of Troutman shows a precharge interval (ϕ_1 and ϕ_2) prior to an evaluation interval (ϕ_3 and ϕ_4). As shown in FIG. 2, the precharge signal is low during the precharge interval (ϕ_1 and ϕ_2) and then goes high for an indefinite period. It is unclear what the precharge signal does in the following read cycles.

The present invention, however, applies a precharge signal for **each** read cycle, as shown, for example, in FIGS. 4 and 5. Each independent claim 1, 6, 11 and 22,

as amended requires a precharge phase prior to an evaluation phase for **each** read cycle. Troutman does not disclose or suggest requiring a precharge phase prior to an evaluation phase for **each** read cycle. For example, claim 1, as amended, requires “positioning a precharge phase prior to an evaluation phase during each read cycle of said read only memory device.” Claims 6 and 22, as amended, require “wherein each read cycle positions a precharge phase prior to an evaluation phase.” Claim 11, as amended, requires precharging said read only memory device during each given read cycle; and evaluating said read only memory device *following* said precharging of said read only memory device during each given read cycle.”

Applicants respectfully request the withdrawal of the rejection of independent claims 1, 6, 11 and 22.

It is noted that the leakage problem of the present invention was not an issue in 1973 at the time Troutman was filed. Thus, Troutman cannot be said to disclose or suggest a method for reducing leakage current.

Independent Claims 16 and 19

Independent claims 16 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Troutman in view of Furutani. The Examiner acknowledges that Troutman did not discuss the precharge power supply not connected in the standby mode. The Examiner merely asserts that Furutani discloses in the Abstract that the connection between *defective* bit lines and the precharge potential supply interconnections are cut off in the standby period.

As indicated above, Troutman does not disclose or suggest requiring a precharge phase for **each** read cycle. This feature is also not shown by Furutani. In addition, in Furutani, it is only the connection between the *bit line pair* and the precharge potential that are cut off in the standby period (and only when there is a failure due to a short circuit between a bit and word line). See, Abstract. Thus, neither Troutman nor Furutani disclose or suggest “wherein at least one memory **column** is not precharged during a standby phase,” as required by claims 16 and 19, as amended.

Applicants respectfully request the withdrawal of the rejection of independent claims 16 and 19.

Dependent Claims

Claims 2-5, 7-10, 12-15, 17-18, 20-21, and 23-26 are dependent on independent claims 1, 6, 11, 16, 19 and 22, and are therefore patentably distinguished over Troutman, or Troutman in view of Furutani or Mashiko et al. because of their dependency from independent claims 1, 6, 11, 16, 19 and 22 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

All of the pending claims following entry of the amendments, i.e., claims 1-26, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



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